

BEFORE THE  
PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

APPLICATION OF PALMETTO WASTEWATER RECLAMATION, INC. FOR AN  
ADJUSTMENT OF ITS RATES AND CHARGES

DOCKET NO. 2021-153-S

SURREBUTTAL TESTIMONY  
OF  
AARON L. ROTHSCHILD

COST OF CAPITAL

ON BEHALF OF  
SOUTH CAROLINA DEPARTMENT OF CONSUMER AFFAIRS

OCTOBER 28, 2021

## Contents

I.	SUMMARY OF MR. MOUL’S COMMENTS.....	3
II.	COMPARABLE COMPANIES .....	7
III.	DISCOUNTED CASH FLOW .....	8
IV.	CAPITAL ASSET PRICING MODEL (CAPM) .....	9
V.	LEVERAGE ADJUSTMENT .....	14
VI.	SIZE ADJUSTMENT .....	14
VII.	UPDATED RATE OF RETURN RECOMMENDATION .....	15
VIII.	PWR’S CAPACITY TO ATTRACT CAPITAL IF A 7.31% ROE IS ADOPTED.....	16
IX.	CONCLUSION.....	19

**I. SUMMARY OF MR. MOUL'S COMMENTS**

**Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?**

**A.** The purpose of my Surrebuttal Testimony is to respond to the following issues addressed in Company witnesses Mr. Moul and Mr. Sorenson's Rebuttal Testimonies. If I do not address an issue raised in the company's rebuttal, it does not mean I agree with the testimony.

1. Comparable Companies;
2. Discounted Cash Flow (DCF);
3. DCF growth rate;
4. Capital Assets Pricing Model (CAPM);
5. Leverage Adjustment;
6. Size Adjustment;
7. PWR's capacity to attract capital if my 7.31% ROE is adopted.

As addressed below, Mr. Moul and Mr. Sorenson's criticisms are invalid and should be rejected. Additionally, I am updating my rate of return recommendation because I am changing my cost of debt recommendation from 3.20% to 3.67% to reflect the market yield of Baa rated corporate bonds between January 2021 to August 2021. As a result of my revised cost of debt recommendation my overall rate of return recommendation has increased from 5.22%<sup>1</sup> to 5.47%. See Table 1 - Revised below.

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<sup>1</sup> Mr. Rothschild's Direct Testimony, page 4, Table 1.

1 **Q. MR. MOUL CLAIMS ON PAGE 4, LINES 11-14 OF HIS REBUTTAL**  
2 **TESTIMONY THAT YOUR PROPOSED 7.31% COST OF EQUITY IS TOO LOW**  
3 **TO ALLOW PWR TO ACHIEVE THE LEVEL OF RETURNS EXPECTED BY**  
4 **INVESTORS. PLEASE RESPOND.**

5 **A.** As discussed in my Direct Testimony, Mr. Moul and I recommend a different cost of equity  
6 for PWR because we have fundamentally different analytical approaches. I focus on using  
7 market data (e.g., stock prices, bond yields, stock option prices) to measure investors'  
8 expectations as much as possible. On the other hand, Mr. Moul relies almost exclusively  
9 on non-market data, including economists' interest rate forecasts even when market data is  
10 available.

11 Additionally, Mr. Moul fundamentally distracts us from the purpose of rate of  
12 return regulation and how to go about determining the appropriate cost of equity. All rate  
13 of return witnesses that I am aware of testify that the cost of equity is market-based  
14 somewhere in their testimony. Mr. Moul is no exception. On page 5, line 15 and page 6,  
15 line 1 of Mr. Moul's Direct Testimony he states that his proposed equity return is market-  
16 based. However, despite mentioning capital market data, he often defines the cost of equity  
17 as accounting returns (return on book equity) instead of return on market prices. In the  
18 example below, Mr. Moul compares expected accounting returns to my market-based DCF  
19 results as if they were equivalent.

1 **Q. MR. MOUL STATES YOU CANNOT EXPLAIN WHY INVESTORS' EXPECTED**  
2 **ACCOUNTING RETURN OF 10.80% SHOULD BE REDUCED TO A MARKET**  
3 **RETURN OF BETWEEN 8.05% TO 8.15%. PLEASE RESPOND.**

4 **A.** Mr. Moul's claim that my testimony shows investors expect to earn a 10.80% return on the  
5 market price of equity is a mischaracterization of the cost of equity because the 10.80% is  
6 an accounting figure (based on expected return on the book value of equity), not investors'  
7 returns (based on expected return on the market value of equity). If South Carolina  
8 consumers' rates are set based on accounting returns instead of market returns, they will  
9 be significantly overcharged. The return to the equity investor should be commensurate  
10 with returns on investments in other enterprises having corresponding risks. An investment  
11 is made at the market price of a utility's stock, not the accounting value.<sup>2</sup> Therefore,  
12 PWR's authorized ROE should be based on the return investors expect on the market price  
13 of utility stocks of comparable risk. The average market price of the water utility stocks in  
14 my proxy group is between 3.5- and 4-times book value. If investors are willing to pay  
15 between 3.5- and 4-times the book value for an expected 10.80% return on book value for  
16 water utilities, they are expecting to earn a return significantly less than 10.80% on market  
17 value. It makes sense that my DCF market-based cost of equity is between 8.05% and  
18 8.15%.

19 If Mr. Moul is correct that we should use investors' expected accounting returns to  
20 determine PWR's authorized ROE, there would be no purpose in producing rate of return  
21 testimonies and conducting hearings. Using Mr. Moul's logic, setting PWR's authorized

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<sup>2</sup> For example, if you were to log in to your brokerage account you would not be able to purchase American States Water's stock for \$37.95 (it's current book value according to Value Line). Instead, you would have to pay \$173.22 (the closing price of its stock on October 27, 2021, according to Yahoo Finance).

1 ROE would be a mechanical exercise of using published accounting returns and changing  
2 capital market conditions would be irrelevant.

3 **Q. ON PAGE 14, LINES 9-22 OF HIS REBUTTAL TESTIMONY MR. MOUL**  
4 **CLAIMS THAT IF A COMPANY HAS A MARKET-TO-BOOK RATIO ABOVE 1,**  
5 **IT IS NOT OVER EARNING. DOES HE PROVIDE A CONVINCING**  
6 **ARGUMENT?**

7 **A.** No. The reason a high market-to-book ratio indicates that a utility company is over earning  
8 is that authorized ROEs are applied to the original cost of a utility company's investment  
9 and are therefore return on book equity. As explained on page 47-48 of my Direct  
10 Testimony, the return on book equity expectation used in the DCF method to compute  
11 growth must not be confused with the cost of equity. Since the stock prices for the  
12 comparative companies are substantially higher than their book value, the return investors  
13 expect to receive on their market price investment is considerably less than the anticipated  
14 return on book value. If the market price is lower than book value, the cost of equity will  
15 generally be higher than the future expected return on book equity, and if the market price  
16 is higher than the book value of a stock as we are currently seeing with water utility stocks,  
17 then the cost of equity will generally be less than the future expected return on book equity.

18 The difference between return on market and return on book can be seen with the  
19 following hypothetical real estate investment. If an investor rents an investment property  
20 for \$1,000 per month that he built for \$100,000, the investment return is 12% annually  
21 (\$1,000 per month X 12 months/\$100,000 = 12%). If this person sells the building to  
22 another investor for \$200,000, the market return on investment to this new owner is 6%  
23 (\$1,000 per month X 12 months/\$200,000 = 6%). Original cost ratemaking requires that

1 consumers' rates are set based on the expected market return applied to the original cost of  
2 the investment. Therefore, in the hypothetical real estate investment example above, the  
3 cost of equity is 6% and rates would be set based on applying this 6% market return to the  
4 original cost, or book value, of the property.

5 In essence, Mr. Moul argues that market-to-book ratios do not indicate that the cost  
6 of equity is lower than the return on book equity because market values have exceeded  
7 book value in 74% of the years since 1945.<sup>3</sup> As discussed above, if investors are willing  
8 to pay between 3.5- and 4-times book value (market-to-book ratio of 3.5 to 4.0) for a  
9 10.80% return on book value for water utility stocks they are expecting to earn significantly  
10 less than a 10.80% return on their investment. The fact that the market-to-book ratios have  
11 been high for a long time does not change the fact that the market-based cost of equity is  
12 lower than the expected return on book value.

## 13 II. COMPARABLE COMPANIES

14 **Q. PLEASE RESPOND TO MR. MOUL'S CLAIM THAT YOU REMOVED**  
15 **ARTESIAN RESOURCES CORP. FROM YOUR PROXY GROUP WITHOUT**  
16 **ADEQUATE JUSTIFICATION.**

17 **A.** As explained on page 40, lines 8-12 of my Direct Testimony I did not include Artesian  
18 Resources Corp. in my proxy group because Value Line does not provide the necessary  
19 information (e.g., future expected return on book equity) for this company.

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<sup>3</sup> Mr. Moul's Rebuttal Testimony, page 14, lines 9-22.

### III. DISCOUNTED CASH FLOW

**Q. ON PAGE 15 OF HIS REBUTTAL TESTIMONY, MR. MOUL CLAIMS THAT YOU SHOULD HAVE RELIED ON EARNINGS PER SHARE (EPS) GROWTH RATES INSTEAD OF RETENTION GROWTH RATES. HOW DO YOU RESPOND?**

**A.** I disagree. Mr. Moul cites a study from 1989 that he claims supports using forecasted earnings per share growth as the growth component in the DCF.<sup>4</sup> However, more recent studies contradict the research Mr. Moul cites in his testimony. A study conducted by McKinsey & Company in 2010 found that “analysts have been persistently over optimistic for the past 25 years with estimates ranging from 10 to 12 percent a year, compared with actual earnings growth.”<sup>5</sup>

On average, analysts’ forecasts have been almost 100 percent too high.<sup>6</sup> Additionally, the further a projection predicts into the future, the likelihood of the projection being correct decreases.

Capital markets, on the other hand, are notably less giddy in their predictions. Except during the market bubble of 1999-2001, actual price-to-earnings (P/E) ratios have been 25 percent lower than implied P/E ratios based on analyst forecasts.

Even if equity analysts’ forecasts were not upwardly biased, as discussed in my Direct Testimony, adding earnings per share growth forecasts to a dividend yield without considering the retention rate produces a flawed result. Using an earnings per share growth forecast as the growth component in a DCF model is like measuring how much money you

<sup>4</sup> Mr. Moul’s Direct Testimony, page 15, lines 13-16.

<sup>5</sup> Marc H. Goedhart, Rishi Raj and Abhishek Saxena, *Equity Analysts: Still too bullish*, Spring 2010.

<sup>6</sup> Ibid.



1 will have in your bank account by simply adding up your paychecks. If you do not consider  
2 what percentage of your paycheck you will retain in your account and what percentage you  
3 will spend, your calculations will not be accurate.

#### 4 **IV. CAPITAL ASSET PRICING MODEL (CAPM)**

##### 5 **A. PLEASE SUMMARIZE MR. MOUL'S CRITICISMS OF YOUR CAPM** 6 **APPROACH.**

7 **A.** Mr. Moul claims that my CAPM method is not useful in this case for the following reasons:

- 8 1. It produces returns that are not credible;
- 9 2. It relies on data not available to investors (e.g. betas);
- 10 3. There is no evidence that the betas (option-implied) I use impact expected returns;
- 11 4. I manufacture my own betas instead of relying on Value Line betas that he claims  
12 investors use.

##### 13 **Q. PLEASE RESPOND TO THESE CRITICISMS.**

14 **A.** My CAPM directly measures investors' expectations as represented in the prices of  
15 securities. My CAPM is 100 percent based on market data that is available to investors:  
16 (1) stock prices, (2) bond yields, (3) option prices, (4) implied volatility, (5) Skew of S&P  
17 500. This information is all publicly available on Yahoo Finance, Wall Street Journal, the  
18 Chicago Board of Options Exchange, and many other sources. My CAPM method is  
19 derived from the prices investors actually pay for securities (e.g., stocks, bonds, options).  
20 My method does not require me to pretend I know what model(s) investors use. Some  
21 investors buy stocks because of a friend's recommendation, a comment made on CNBC or  
22 a late-night tweet. The number of models used by investors is unknowable and arguably

1 as numerous as individual investors and constantly changing over time! Mr. Moul's claim  
2 that a CAPM methodology should be implemented mechanically with Value Line's  
3 published 5-year historical betas because "it is well known"<sup>7</sup> that investors use them  
4 ignores the complexity of how billions of human beings make decisions and humanity's  
5 interest and aptitude for creativity and innovation. Regardless of what models investors  
6 use, or how they make their investment decisions, their return expectations, and the  
7 appropriate cost of equity for PWR, are represented in the prices investors are willing to  
8 pay for stocks, bonds, and options. As such, Mr. Moul's criticisms are without merit.

9 **Q. PLEASE RESPOND TO MR. MOUL'S CLAIM THAT THE RESULTS OF YOUR**  
10 **CAPM METHOD ARE NOT CREDIBLE SIMPLY BECAUSE HE BELIEVES**  
11 **THEY ARE LOW.**

12 **A.** As discussed on pages 5-6 of my Direct Testimony, my cost of equity recommendation of  
13 7.31% (6.13% to 7.70%) for PWR is in the middle of the range of the expectations  
14 published by major banks and brokerage houses (5.5 to 8.5%). The return expectations  
15 published by all these financial institutions are based on their own financial models and are  
16 broadly for the overall stock market (e.g., US Large Cap, S&P 500). My cost of equity  
17 recommendation is based on government-regulated water utility companies only. Given  
18 the relatively lower risk associated with monopoly utilities, it is unlikely that investors  
19 would expect to earn a higher return for a utility company than for the overall stock market.

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<sup>7</sup> Mr. Moul's Rebuttal Testimony, page 23, line 18.

1 **Q. PLEASE COMMENT ON MR. MOUL'S CLAIM THAT YOU USE DATA THAT**  
2 **IS NOT AVAILABLE TO INVESTORS.**

3 **A.** The data I have used is available to any investor that has access to the internet. No  
4 subscription is required to obtain stock prices or stock option prices on Yahoo Finance.<sup>8</sup>  
5 On the other hand, a Value Line subscription is required to obtain the betas used by Mr.  
6 Moul (Value Line's published 5-year historical betas). This means the data I use is more  
7 widely available than the data Mr. Moul has used. The Value Line betas used by Mr. Moul  
8 are also based on the past and therefore it is unlikely they measure current investors'  
9 expectations regarding utility betas in particular and risk and return in general. It is  
10 inappropriate to rely exclusively on backward looking measures when data regarding  
11 current investor expectations is available. The purpose of this proceeding is to determine  
12 the current, market-based cost of equity.

13 **Q. PLEASE COMMENT ON MR. MOUL'S CLAIM THAT THERE IS NO**  
14 **EVIDENCE THAT BETAS (OPTION-IMPLIED) IMPACT INVESTOR**  
15 **EXPECTED RETURNS.**

16 **A.** Mr. Moul's statement is analogous to saying the following: there is no evidence that the  
17 sale price of a house impacts what real estate investors are willing to pay for a house. The  
18 option data that I use to calculate the betas of each of the companies in the RFC Water  
19 Proxy Group is a direct measure of what investors are willing to pay for securities.

20 On page 77, lines 15-23 and page 78, lines 1-30 of my Direct Testimony I provide  
21 evidence regarding the superiority of the predictive power of a "mixed" beta consisting of

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<sup>8</sup> Current stock option prices are widely available for free on websites like Yahoo Finance. Historical stock option data is available for free for investors with a brokerage account at companies like TD Ameritrade.

1 a simple average of the six-month option-implied beta and the six-month historical beta.  
2 The purpose of my testimony is to measure investors' expectations and their expectations  
3 may or may not turn out to be accurate. However, the fact that option-implied betas are a  
4 superior measure of future betas supports their use in the CAPM because they are forward  
5 looking. In other words, there is evidence that option-implied betas are relevant to what  
6 investors care about, future expected returns. On the other hand, Mr. Moul relies  
7 exclusively on historical betas which have a risk of being less relevant to the future,  
8 investors' current expectations and the cost of equity.

9 **Q. PLEASE COMMENT ON MR. MOUL'S CLAIM THAT YOU SHOULD HAVE**  
10 **USED VALUE LINE'S PUBLISHED HISTORICAL BETAS INSTEAD OF**  
11 **CALCULATING BETAS BASED ON STOCK OPTION PRICES.**

12 **A.** Mr. Moul's claim that I should have used Value Line's published betas implies that  
13 investors only use Value Line's published betas and that I could have implemented my  
14 CAPM without making calculations. Of course, investors have access to betas published  
15 by many different sources and Mr. Moul and I both had to decide which published betas to  
16 use if we did not calculate our own.

17 It is not possible to implement a CAPM without making calculations and decisions  
18 regarding which data to use. Mr. Moul also makes decisions regarding which data to use,  
19 and he also makes calculations. For example, Mr. Moul chose to use historical betas  
20 published by Value Line instead of Bloomberg, Yahoo Finance, Reuters, Market Watch,  
21 NASDAQ, YCharts or many other publications available to investors. Many of these  
22 sources publish different beta values for the same companies because their calculations  
23 vary. Mr. Moul also chose to use a historical risk premium in his CAPM based on the

1 arithmetic average of one year returns from 1926-2020 instead of a time-frame consistent  
2 with using a risk-free rate of yields on 30-year U.S. Treasuries and instead of using the  
3 geometric average return.

4 **Q. DO YOU THINK OPTION-IMPLIED BETAS SHOULD BE USED IN COST OF**  
5 **CAPITAL CALCULATIONS?**

6 **A.** Yes. I think option-implied betas are one of the best tools currently available to measure  
7 the overall risk expected by investors at any given moment in time, and that is  
8 fundamentally what cost of capital determinations should be based on. As with other tools  
9 and methodologies we use regularly, option-implied betas are not a silver bullet and should  
10 be used in conjunction with other valid approaches to determine ranges of reasonableness  
11 for the cost of capital. The more valid tools we use, the more we can narrow down or  
12 confirm these ranges of reasonableness to ensure a more accurate result.

13 **Q. MR. MOUL CLAIMS ON PAGE 23 OF HIS REBUTTAL TESTIMONY THAT**  
14 **YOUR CAPM APPROACH HAS A VARIETY OF PROBLEMS THAT MAKES IT**  
15 **NOT USEFUL IN THIS CASE. PLEASE RESPOND.**

16 **A.** Mr. Moul's conclusion is at odds with numerous utility commissions, including this one.  
17 As discussed on page 15 of my Direct Testimony, the Connecticut Public Regulatory  
18 Authority recently found my market-based approach to be credible and persuasive. The  
19 Connecticut Authority found my CAPM methodology "enables the Authority, and all  
20 docket participants, to better consider a just and reasonable rate of return based on the same  
21 prospective basis that base distribution rates are set." In Docket 2019-290-WS, this  
22 Commission stated that my approach was "unique in that [it] included the use of both  
23 historical and forward-looking, market-based data" and adopted my recommended ROE

1 which was based on, among other methods, my CAPM methodology using option-implied  
2 betas.

### 3 **V. LEVERAGE ADJUSTMENT**

4 **Q. MR. MOUL STATES YOU HAVE NOT REFUTED THE ACCURACY OF HIS**  
5 **LEVERAGE ADJUSTMENTS. DO YOU HAVE ANY ADDITIONAL COMMENTS**  
6 **REGARDING MR. MOUL'S LEVERAGE ADJUSTMENTS?**

7 **A.** No. As stated in on pages 94 to 96 of my Direct Testimony, Mr. Moul's leverage  
8 adjustment goes against original cost rate making and should be rejected.

### 9 **VI. SIZE ADJUSTMENT**

10 **Q. MR. MOUL CLAIMS THAT THE CAPM METHODOLOGY REQUIRES A SIZE**  
11 **ADJUSTMENT BECAUSE SIZE IMPACTS THE FINANCIAL PERFORMANCE**  
12 **OF A SMALL COMPANY. PLEASE RESPOND.**

13 **A.** As discussed on page 98 of my Direct Testimony, Moul's conclusion that smaller firms  
14 require a higher COE is not supported by the evidence and therefore PWR's consumers  
15 should not be charged higher rates because of its size. Even if we accept the controversial  
16 conclusion by some of the studies cited by Mr. Moul, including research from the 1990s,  
17 that small firms have a higher cost of equity, it is not appropriate to assume this research  
18 applies to PWR. PWR is a subsidiary of SouthWest Water Company and therefore has  
19 access to financial and technical resources that are not available to standalone small  
20 companies.

**VII. UPDATED RATE OF RETURN RECOMMENDATION**

**Q. WHY ARE YOU UPDATING YOUR RATE OF RETURN RECOMMENDATION FOR PWR?**

**A.** I am updating my rate of return recommendation because I am changing my cost of debt recommendation from 3.20% to 3.67% to reflect the market yield of Baa rated corporate bonds between January 2021 to August 2021. In my Direct Testimony I calculated my cost based on the relative yield of Baa Corp bonds to 10-Year U.S. Treasury bonds. See Exhibit ALR-6. It is appropriate to set PWR's cost of debt based on the Baa Corp bond yields, and therefore I am updating my cost of debt recommendation. See Exhibit ALR-6S.

**Q. PLEASE PROVIDE YOUR UPDATED RATE OF RETURN RECOMMENDATION FOR PWR.**

**A.** My updated rate of return recommendation is shown in the table below. As a result of my revised cost of debt recommendation my overall rate of return recommendation has increased from 5.22%<sup>9</sup> to 5.47%. The numbers highlighted in yellow have changed because of this update.

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<sup>9</sup> Mr. Rothschild's Direct Testimony, page 4, Table 1.

**TABLE 1: REVISED - ALR RECOMMENDED RANGE MIDPOINT - PALMETTO WASTEWATER RECLAMATION, INC.  
Docket No. 2021-153-S**

	<b>Capital Structure Ratios</b>	<b>Cost Rate</b>	<b>Weighted Cost Rate[1]</b>
<b>Long-Term Debt</b>	50.74%	3.67%	1.86%
<b>Short-Term Debt</b>	0.00%	0.00%	0.00%
<b>Preferred Equity</b>	0.00%	0.00%	0.00%
<b>Common Equity</b>	49.26%	7.31%	3.60%
<b>Rate of Return</b>			5.47%

[1] The 5.47% rate of return reflects rounding up.

## VIII. PWR'S CAPACITY TO ATTRACT CAPITAL IF A 7.31% ROE IS ADOPTED.

**Q. MR. SORENSEN CLAIMS THAT IF THE COMMISSION ACCEPTS YOUR 7.31% ROE RECOMMENDATION, IT WILL PUT PWR AT A DISTINCT DISADVANTAGE IN ATTRACTING CAPITAL BECAUSE THE ROE IS LOWER THAN THOSE GRANTED IN OTHER JURISDICTIONS. PLEASE RESPOND.**

**A.** I strongly disagree. Mr. Sorensen presents a table on page 4 of his Rebuttal Testimony showing authorized ROEs for PWR's affiliates that range between 7.85% and 9.93% in five states, including South Carolina. As explained on page 10 of my Direct Testimony, even if it were assumed that all historical authorized ROEs of wastewater and water utility companies in other proceedings are based on accurate market-based cost of equity calculations, they are from the past. The cost of equity should be based on current market conditions. Unless authorized ROEs are set based on investors' current expectations as indicated by market data at the time of the proceeding, the resulting rates charged to



1 consumers would either be too low to permit a utility to raise capital on reasonable terms  
2 or too high such that ratepayers would be overcharged. For these reasons, I strongly  
3 recommend using the results of my market-based methods as confirmed by the equity  
4 return expectations of leading financial institutions (5.5 to 8.5% return on equity for the  
5 overall market).

6 **Q. THE TABLE ON PAGE 4 OF MR. SORENSEN'S REBUTTAL TESTIMONY**  
7 **SHOWS THAT MONARCH UTILITIES L.P. HAS AN AUTHORIZED ROE OF**  
8 **9.00% AND OREGON WATER UTILITIES HAS AN AUTHORIZED ROE OF**  
9 **9.50%. WHY WOULD AN INVESTOR PROVIDE ANY FUNDS TO A COMPANY**  
10 **WITH AN AUTHORIZED RETURN OF 9.00% WHEN IT COULD EARN 9.50%**  
11 **BY INVESTING IN A DIFFERENT UTILITY COMPANY?**

12 **A.** If the market-based cost of equity was 10.00%, all else being equal, investors might not be  
13 inclined to invest in utility infrastructure with an authorized ROE of 9.00% or 9.50%.  
14 However, if the market-based cost of equity is less than 9.00% both companies would be  
15 able to raise money because they both would provide attractive returns. As discussed in  
16 my Direct Testimony, market data indicates that the cost of equity for PWR is between  
17 6.13% and 7.70% and therefore investing in PWR will be an attractive investment if this  
18 Commission grants PWR an authorized ROE within that range regardless of the authorized  
19 ROEs for other utility companies.

20 **Q. REGARDLESS OF WHAT THE MARKET-BASED COST OF EQUITY IS**  
21 **WOULDN'T INVESTORS PREFER TO EARN A 9.50% RETURN THAN 9.00%?**

22 **A.** Yes. Investors would prefer to earn 9.5% rather than 9.0% return on book equity because  
23 this would lead to a higher return on the market price of equity as well. And investors

1 would prefer to earn a 30% return rather than 9.5%; however, allowing utilities to earn a  
2 return on book equity above the returns required by investors goes against utility regulation  
3 principles and would be unfair to consumers.

4 **Q. DOES MR. MOUL PROVIDE DATA THAT DEMONSTRATES THAT**  
5 **INVESTORS WOULD PROVIDE CAPITAL FOR A UTILITY COMPANY WITH**  
6 **AN AUTHORIZED ROE OF 7.31% EVEN IF THERE ARE OTHER UTILITY**  
7 **COMPANIES WITH AUTHORIZED ROES ABOVE 9.00%?**

8 **A.** Yes. Schedule 14 [2 of 3] of Mr. Moul's Direct Testimony shows both historical and  
9 project return on book equity for dozens of blue-chip companies. Estee Lauder earned a  
10 return on book equity of 38.4% in 2020 and Value Line projects that it will earn a return  
11 on book equity of 53.00% between 2024-2026. On the other hand, Assurant Inc. earned a  
12 7.4% return on book equity in 2020 and Value Line projects it will earn 7.5% return on  
13 book equity between 2024-2026. By Mr. Sorensen's logic, Assurant Inc. would have  
14 challenges raising equity capital because investors would prefer to earn a 53.00% return  
15 rather than a 7.5% return. However, investors are happy to provide equity capital to  
16 Assurant Inc. Its market capitalization is nearly \$10 billion as of October 26, 2021 and its  
17 stock price has increased about 15% in 2021.<sup>10</sup>

18 Mr. Moul's Schedule 14 [2 of 3] shows historical and projected return on book  
19 equity that range between under 5% and over 100%, but as far as I know all these  
20 companies are still in business. The reason all of these companies are able to raise capital  
21 despite the large difference in return on book value of their equity is because the return that  
22 matters to investors is the return on the market price of equity or stock. For example, as

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<sup>10</sup> Yahoo Finance.

discussed above, Value Line projects a return on book equity of 53% for Estee Lauder, but the market price of Estee Lauder is over \$300 per share as of October 27, 2021<sup>11</sup> and its book value per share is \$16.74<sup>12</sup>. In other words, if investors expect to earn a 53% return on book value of its equity (\$16.74) they will expect to earn a 2.73%<sup>13</sup> return on the market price of Estee Lauder stock (\$325.37). As this example demonstrates, return on book equity cannot be compared directly to investors' expected return on the market price of equity. And the cost of equity is based on investors' expected return on the market price of a stock, not return on book equity. This data shows that Mr. Sorensen's claim that if my 7.31% ROE recommendation is adopted, "it will put PWR at a distinct disadvantage in attracting capital" is at best an oversimplification. However, in my opinion, it is a distortion of financial reality.

## IX. CONCLUSION

**Q. PLEASE SUMMARIZE YOUR RESPONSE TO MR. MOUL'S AND MR. SORENSEN'S REBUTTAL TESTIMONIES.**

**Q.** Mr. Moul and Mr. Sorensen's criticisms of my Direct Testimony are invalid. The arguments presented in their Rebuttal Testimonies are unfounded and should therefore be rejected. As explained in my Direct Testimony, my DCF method maintains its accuracy irrespective of the market-to-book ratio of utility stocks. Mr. Moul's comparison of projected returns on book equity to DCF results leaves out the most important piece of

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<sup>11</sup> Yahoo Finance.

<sup>12</sup> Estee Lauder's Value Line Company Report, September 10, 2021.

<sup>13</sup> 53% Return on book equity X \$16.74 = \$8.87 per share.  $\$8.87 / \text{Estee Lauder stock price of } \$325.37 = 2.73\%$ .

1 information in determining the cost of equity which is: what are investors willing to pay  
2 for what they expect to receive in the future? Return on book equity is not the cost of  
3 equity. Although I use my cost of equity models to determine my cost of equity  
4 recommendation, the “cost of equity in today’s financial market” section of my Direct  
5 Testimony also supports my recommendation; stocks are expensive and interest rates  
6 remain near historic lows both of which support my cost of equity recommendation. My  
7 cost of equity recommendation of 7.31% is market-based and would allow PWR to raise  
8 capital on reasonable terms in today’s capital markets.

9 **Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

10 **A.** Yes.